ever thought of doing so, because in doing this he would have descended entirely out of his sphere: he would have repudiated architecture, would have renounced the high and distinctive aims of his art, and evaded all its difficulties. Architecture, even the most unambitious, attempts qualities that in this structure have not been dreamt of. Architecture attempts, for instance, the excellence of completeness, of an integral whole so adjusted as to need (like the works of nature) no remedial after-patching. Architecture attempts things higher than keeping out the wet; and that which does *not*, which attempts no more than material necessities, *is not architecture at all*, but simply *engineering*. That it is an essential *part* of architecture, I readily admit. The greater includes the less. Architecture includes the whole of engineering (*statical* engineering) as much as grammar includes the whole of orthography; and can no more exist without it than poetry without language, or painting without brushmanship. Every real architect, therefore, must be both as *able* and as *unwilling* to turn mere statical engineer, as Landseer to turn sign-painter, or a physician to keep a druggist's shop.

I cannot but think it a fact creditable to English architects, and which (whether now appreciated or not) will hereafter redound to their honour, that not one should, in the present juncture, have condescended to degrade his profession by renouncing his art: not one has been seduced, by the prospect of royal favour and the popular fame of an hour, to stoop unsolicited to a task wholly beneath the noble aims of a fine art, and in doing which he would have forfeited his claim to the proud title of artist. It might go worse with architecture yet. I should be very sorry to belong to a profession that could not completely disown the "crystal palace" and all its wonders.

On the other hand, it is to be wished architects would learn more respect to themselves and their noble art, than to degrade it by complaints about their "bread being taken out of their mouths" by those beneath them. Do we ever hear of the sign-painters, how they rob the bread of the Royal Academy? or does Dent complain of the increase of wooden clocks? If England choose to have less architecture, or to do without it altogether, that is *her* disgrace and loss, not *ours*. We may mourn over it, as all earnest men over the brutalising tendencies of a sinking age; but, though it should grieve us, it cannot affect our bread, because, if we be what we pretend, able to do *more* than the age wants, we can, at least, do all that it *does* want. No professor of a liberal art has any right to complain on this narrow ground, because, in professing the greater, he necessarily professes the less—the lower—the mechanical parts of his art. If he want bread, let him descend, and instead of doing what he can, do what will pay. The hardship is not of £ s. d. if wholly a matter of taste.

If Landseer and Maclise were obliged, for want of higher work, to paint signs, or the professors at our universities to teach schoolboys, they would have no right to complain about bread, but solely on higher grounds.

Admiring, as I do, the "Historical Inquiry into the Principles of Beauty," &c., it astonishes me that its author should imagine any of his principles carried out in a work repudiating beauty. That architecture can only advance by the same process that advances greenhouse-building or any other art, is a bare truism which we needed no historical inquiry to discover. Growth perfects a sheep: growth perfects a goat: but no process converts a sheep into a goat. Practice and stored experience advance architecture—the same things advance engineering — but no practice can convert one into the other. Improvements in greenhouses or exhibition-houses, though carried on by a succession of Paxtons for 1,000 years, could approach not a step nearer architecture. You might as well tell me that Dent's improvements in chronometers, if pursued far enough by his successors, will produce architecture.

Improvements in construction (even if not making it architecture) doubtless have their effect on that art; but there must first be the art itself on which they are to act. If structural inventions can of themselves produce new and true art, why did not the *arch* (invented before the Christian era) ever produce this effect till twelve centuries after? When iron shall be made a material for *churches* by men like the monks of the twelfth and thirteenth centuries, zealous for God's glory, and weaned from lower motives,—then, and not till then, will there be a new order of architecture: and it will require no long series of improvements —one generation will suffice.

An order of architecture does not originate out of the temple.

An order of architecture is a great thing: it is that which, itself no counterfeit, is thought worth counterfeiting and sub-counterfeiting for ages.

This is a greater thing than the world for its own purposes can do. Religion has done it in many ages, many climes, and many creeds. The results mutely challenge the world to do the like. The world has not responded to the challenge, and cannot.

I am aware that Mr. Fergusson has the *Times* and all the newspapers with him in calling the "glass palace" architecture. They have no more right than he to call it so. Every one has a right to coin new words—no one to change the application of old ones. Such change is no trifle, for the world is governed by words. However, if right be in this case to yield to might, we may consider that the thing hitherto called architecture has been robbed of that name, it being applied to that which never before 1850 claimed it. We must preserve the *thing* at all hazards, let who will take the *name*. So, if the name has been fraudulently appropriated to something else, it will behove us to find the old thing a new name; for without a name of its own exclusively, it cannot subsist. If I might humbly suggest a name for consideration, it would be CALOTECTURE.* E. L. G.

RESOURCES OF IRELAND.

MARBLE AND MINERALS.

Whilst the energy, capital, and enterprise of this great commercial nation are being lavished over every land of the terraqueous globe, it is somewhat puzzling to explain wherefore so little attention is devoted to the elimination of Irish fecundity. In that island the surface is blessed with a soil fertile in the production of all the vegetating varieties of the temperate zones, and the lower stratification abounds in all that is valuable in metallic minerals, coal, marble, granite, with every species of building stone and slate. This profusion of Nature's choicest (because most useful) products is now well known to exist there, and still a repugnance to invest money in Irish speculations obtains to such an extent amongst the capitalists here, that the fairest, the most vicinal, and therefore the most convenient field for adventure, is left, if not wholly untried, at least wholly unprofitable.

Some copper mines have been wrought in Wicklow, and with moderate success. Coal-mines are being worked (and have been for many years) to great advantage in Kilkenny (a central county). Marble quarries exist and have been long worked in the same county. Coal is also found in Antrim, Down, and other counties. Black and green marble quarries have of late been yielding some profit to two English gentlemen, named Franklin, brothers, and the quality of these marbles is much prized for their hardness and for the immense size of the blocks which may be raised, as well as from the beauty of the colour; but, with this latter exception, there is no English mining or quarrying company in Ireland.

Granites are also to be found in mountain masses, ranging over nearly one-half of the island, and fencing with lofty peaks and giant bluffs the margin of the ocean down to several of her best harbours; still this material is rarely used for buildings or for paving, save in the country of its deposit.

Very recently, also, quarries of paving-stone (flagging), in large slabs, which laminate freely into equable flakes of one, two, or three, or more, inches in thickness, and to almost any required superficies, are being worked by the same enterprising English gentlemen: being harder than York paving, it is less absorbent, and is peculiarly adapted for causeways with much traffic, as it dries much sooner after rain, and resists longer the tread of multitudes for city pavements.

The only evidences of the Hibernian Quarry in London are to be seen at Messrs. Franklin's wharfs, Westminster (Whitehall, Cannon-row).

It is true that some few capitalists are now encouraging the manufacture of peat charcoal for deodorisation, and for the conversion of London sewage into a fertilising stimulant; but even this latter is the result of (as many may perhaps say it ought to be) Irish enterprise.

Our architects have hitherto imported from Italy or distant lands the materials for the construction of such few marble palaces or churches as we have; and they were constrained to do so, for the existence of that material so near at hand was (if known) not divulged before the present century.

Shafts as large as the columns of the Pantheon might be hewn from the Dalkey Hill, close to Kingstown harbour, and columns of marble, equally large, from the Galway quarries alluded to; but the spirit of the age seems little to favour the grandiose notions of Romans, who transferred the pillars of their temples from Egypt.

The grey and red granite of Scotland has been latterly imported, and forms, when polished, the most ornamental as well as the most durable material for fine elevations in this variable climate. The evidences exhibited in the pilasters that adorn the front of the Conservative Club in Pall-mall, discover the aptitude of these formations for effect and beauty. The same hardness and susceptibility of polish belongs to the Irish granite, but in a much higher degree to the numerous kinds of marble; and now that a taste for ornate designs in domestic architecture seems to prevail, it is to be hoped that some individual of spirit, or some club or company will essay to produce a monument of native skill in diverse marbles of duly interspersed colours, which may surpass one that I have seen in Italy (the church of Sienna), and which certainly left on my memory a recollection rather of the striking than the agreeable kind; for that sacred edifice, with its piebald alternations of black and white in *horizontal lines*, had the effect on my sense of the ludicrous, not dissimilar to the entrance of Mr. Wright on the Adelphi stage with a pair of broad-striped trowsers, representing hoops, round his shanks, or the line of black circles that commonly encompass a gin cask (somewhat misplaced) in an ale-house.

The example of the pilasters in the Pall Mall Club are truly ornate. I will not say so much for the sunken panels in the same material in a Venetian's Piccadillico palace! But what might not be effected if the whole paries were finished, tooled, and polished in the same material?

This last suggestion I throw out as an inducement for architects to send their drawings and scales to Ireland, where labour is exceedingly cheap, so that the blocks might be there hewn, finished, and polished at the quarry; that by such management the specific weight of the requisite material only should be chargeable in the transit: besides that, by such means the cost of workmanship must be vastly reduced and the expense of carriage proportionately diminished, for the packing of blocks to save abrasion could not add much to the outlay in buildings where the cost of the elevation is so little considered. The same design is carried out both in the back and front elevations of the Pall Mall Club-house, so justly admired.

With respect to the stone now in use, Portland or Bath, every lover of architecture must regret the instability not only of the colour, but of the material; and all who have seen the smouldering tracery year by year obliterating

* Mr. H. B. Garling, Mr. Edward C. Hakewill, and others have also (theoretically perfect) without Mr. Fergusson's views.